

# PROCEEDINGS

OF THE

## CLINICO-PATHOLOGICAL SOCIETY OF WASHINGTON, D. C.

1865. May 6. *Pseudo-Membranous Croup*.—Dr. H. P. MIDDLETON, reported the following case:—

Joseph Fronwald, aged fifteen and a half years, was admitted to the Episcopal Hospital, Philadelphia, March 20th, 1864, suffering with an ugly and peculiar looking ulceration of the upper lip and nose, with which he had been afflicted some eighteen months. The disease had extended up beyond the anterior nares, wholly including the nasal passages, destroying the cartilaginous septum, and rendering the boy a most pitiable object to behold. Respiration, of course, was carried on through the mouth, and the voice was decidedly husky—supposed to be due to the condition of things just related. I may here state that his general health appeared to be perfect. About two weeks after his admission to the hospital, he one morning complained of sore throat. I examined the throat and found an ulceration, similar to that upon the lip and nose, about the posterior nares, and a little to either side. The surface was raw and bossilated. The fauces were inflamed, and there was a feeling of heat and great soreness extending down the larynx, but no white or ash-coloured exudation could be seen. As might be expected, there was considerable febrile reaction. A saline cathartic, a cooling diaphoretic, the external application of lin. ammoniæ, with some restrictions in diet, constituted the treatment for this throat complication. In the course of three or four days the boy was relieved of everything except the ulceration, which continued to be as obstinate as that of the face.

On the 4th of May, about six weeks after admission, the patient again complained of sore throat, etc., which was again met by the same general plan of treatment as was previously adopted—tr. iodine being substituted for the ammon. liniment—but this time without relief.

On the following day the voice was more husky, but unattended by cough or expectoration. The dose of febrifuge was increased, and a steam bath ordered. On the evening of the same day the fever had greatly decreased, and the boy's condition seemed much improved, though he continued to complain of great soreness in the throat. Leeches were ordered but could not be obtained.

On the following morning the patient was worse, the fever had increased, and the general condition seemed to be pretty much as it had been two days previously. Some slight modification was made in the medicine that was being administered, and eight leeches applied to the anterior and

sides of the neck. At 7 P. M. I was summoned hastily by the nurse, who said he thought Joseph was dying. On reaching the ward I found him gasping for breath; he would grasp the throat with his hand and pull at it as though to enlarge the opening for the admission of air. The voice had degenerated to a mere whisper; respiration similar to that of a person labouring under a severe attack of asthma. I desired him to cough, but he declined—but finally complied with the request—and, in doing so, revealed the character of the trouble by the croupy sound. I at once called in the other medical gentlemen of the hospital, and the diagnosis being confirmed, we immediately commenced to administer powdered alum in teaspoonful doses at short intervals, which failed, however, to produce emesis or even nausea, although  $\text{℥jss}$  was taken.  $\text{℥j}$  of sul. zinc and  $\text{℥ss}$  ipecac were then given, and in a short time free vomiting followed, but not a particle of false membrane was ejected. During the time consumed in the administration of emetics, symptoms of exhaustion had supervened, and the prostration was now extreme. The lips, portions of the face, ends of the fingers had become permanently livid; the pulse was imperceptible at the wrist, and a cold, clammy sweat bedewed the whole surface. Stimulants were freely administered, but all to no purpose. The pitiable sufferer, after repeated convulsive efforts, sprang from his bed, and fell upon the floor a corpse—dying literally from “want of breath.”

An *autopsy* was made eighteen hours after death, and the specimen, which is herewith presented to the Society, obtained. (The specimen consisted of larynx and a portion of the trachea, so slit open as to show the interior, which was almost entirely closed by a coating of false membrane.)

There are two or three points connected with this case which I wish to bring to the attention of the Society.

*First.* The age of the patient; as before stated, he was fifteen and a half years old. Now, although this is not unprecedented, it certainly is unusual, the disease being one almost exclusively confined to childhood. Meigs does not report a case occurring after the seventh year; Watson, in referring to ninety-one cases reported by Jurin, states that only *one case* occurred after the tenth year. Dickson says that it is very seldom seen in children before they are weaned, or after the age of puberty, although he reports one case of a lady fifty years of age, who was subject to it all her life.

*Secondly.* I would call attention to the rapidity with which the disease progressed, or, at least, manifested itself, during the last ten or twelve hours of the boy's existence.

*May 20. Traumatic Tetanus.*—Dr. J. FORD THOMPSON reported the following case:—

Steward B. P. Blewitt, 24th Regiment Veteran Reserve Corps, age thirty; of rather delicate constitution, but enjoying tolerably good health. May 8th, 9 P. M., in turning over the seat of a wagon, received a small punctured wound, from a nail, in the palm of the right hand immediately over the metacarpo-phalangeal articulation. The wound bled quite freely, but ceased in a short time, when he applied a compress wet with water and tr. opii to relieve the pain, which he said was quite severe. By 11 P. M. the pain had much increased, extending up the forearm, and there was also contraction of the digital muscles. Becoming very uneasy with



that feeling of impending evil, so characteristic of this disease, the surgeon in charge, Dr. Frisbie, was summoned, and prescribed the local application of warm fomentations with laudanum and camphor, and a dose of opium internally.

May 9, 2 A. M. The treatment has afforded no relief, and the spasms have extended up the arm, with well-marked trismus and great difficulty in deglutition. Dr. Frisbie again saw him, and administered tr. opii, spts. æth. comp., āā gtt. xl., remaining with the patient during the remainder of the night, giving him twenty-five drop doses of laudanum every half hour, until 7 A. M., when he fell asleep and slept until 9 A. M. Saw him in consultation with Dr. Frisbie at 8.15 A. M., when he was sleeping soundly, with a good pulse, no spasmodic contractions, and the muscles of the jaws perfectly relaxed.

A few minutes after 9 A. M. the patient awoke, and was soon seized with the same symptoms, with an extension of the spasms to the muscles of the back of the neck and of the back; though there was no opisthotonos, the contractions not being tonic in character. At 10.30 A. M. the inhalation of chloroform was commenced, and he was kept partially under its influence until 5 P. M. This treatment greatly diminished the frequency and force of the muscular spasms, but it was found that he was growing much weaker, and therefore the use of the chloroform was suspended. He was then put upon opium and whiskey, but continued to fail, dying May 10, 1 A. M., twenty-eight hours after the receipt of the injury.

In his summary of this case Dr. Thompson referred to the assertion made by Erichsen in his work on surgery, who says: "*Wherever the wound may be situated the first symptoms are observed in the portio-dura of the seventh pair of nerves,*" and cited a case which had occurred during his army practice, which would tend to disprove such assertion; the case being that of a soldier who had had his leg amputated at the point of election, and in which the spine of the tibia had ulcerated through the anterior flap; in this case the spasms of the muscles of the thigh preceded several days any evidence whatever of an affection of the portio-dura.

In speaking of the treatment, he referred to two cases treated by Dr. W. V. B. Bogan, of this city; in the first of which the patient recovered, the treatment being mainly injections of sulphuric ether. In the second case (the patient being a lady in whom the disease supervened seven or eight days after an abortion had taken place) the same treatment was pursued, but death resulted. He also referred to a case treated at the Armory Square Hospital, in which tetanus ensued after a severe lacerated wound of the buttocks; this case recovered, being treated by the applications of ice over the spinal column, and the local application of morph. sulph. to the wound.

In the discussion which ensued after the reading of the paper, Dr. Middleton mentioned a case which occurred at Blockley Hospital, Philadelphia, under his notice, in which tetanus ensued as the result of an injury to the ulnar nerve; the nerve was divided and the patient recovered.

*May 27. Compound Fracture of Ulna; Resection of Elbow-Joint.*—Dr. S. J. Todd reported the following case:—

C. S., mulatto, thirty-five years of age, tall, robust, and of good general health, came under my care July 21st, 1864. He had received a

wound on the anterior aspect of the left forearm, one inch from the joint, and extending towards the hand a distance of three inches. The wound was caused by a blow inflicted by a spade in a street fight; his arm, at the moment of the accident, being in a semi-flexed position, protecting his head, to which the blow was directed. The edges of the wound were rough, and venous hemorrhage profuse. Passing my finger into the wound, I found there was a comminuted fracture of the ulna, two inches from the extremity of the olecranon process, and involving three or four inches of the shaft of the bone. The following day, in the presence and with the assistance of Drs. Dove, Lincoln, and Wordsworth, resection of the joint was performed. The wound having been enlarged, and the olecranon dissected out, the end of the bone was then sawn off, and all spicula and clots removed. The wound was filled with lint, the limb placed in a semi-flexed position, and cold water-dressing applied until the 30th, when a deeply-seated abscess was detected two inches above, and extending towards the joint, but not communicating with it. This was opened. The patient then slowly improved; the wound looked healthy, pus laudable, appetite good, and there was but little pain in the arm, until the 26th of August, when two more abscesses, situated on the anterior aspect of the arm, were discovered and opened. About this time he was admitted to the Quartermaster's Hospital, in charge of Dr. Lincoln, where I continued to attend him. I may here remark that his diet throughout his sickness had been good and nutritious. He had also been taking the muriated tincture of iron. On the 13th of September the wound and the abscess previously opened, suddenly ceased to discharge. In a few days he complained of pain in the lumbar region, loss of sleep and of appetite; his pulse rose to 110; urine scanty and highly coloured. On the 11th of September anasarca was noticed. His urine was tested by heat and nitric acid, and some little albumen detected. Powders of *uva ursi* and bicarb. soda were ordered him. On the 1st of October he was discharged, his wound being in a healthy condition and all symptoms of renal disease having disappeared. On the 10th of October I was again called to see him, and found the same condition of things as in the former attack, except that the dropsy was more general, respiration being impeded by the abdominal distension. I again tested his urine, and found it loaded with albumen. Wine of colchicum and bitartrate of potash were given, and  $\frac{1}{16}$  gr. of elaterium twice a day. On the 15th of October I opened another abscess, which had formed on the inner side of the forearm; it discharged freely, and from this time he improved rapidly.

The limb is now partially ankylosed in a semi-flexed position, being still of some use to the patient.

The first and most prominent question that suggests itself in connection with this case, is this: Was the subacute inflammation of the kidneys, with the symptoms of general dropsy following it, dependent upon the cessation of the discharge of pus? Or, was it simply incidental—a coincidence—and not an effect?

(Oct. 1st, 1867. Dr. Todd wishes to add to the above report that he has at this date had an opportunity of examining the elbow of the patient, and that he now has free motion both of the elbow-joint proper and of the humeral end of radius, in pronation and supination. In the language of the patient—"that arm is as good as its fellow.")



*November 25. Operation for the Radical Cure of Hernia.*—Dr. PRENTISS reported the following case:—

Daniel King (col.), a stout mulatto, aged about 25 years, apparently of good constitution, was admitted to Quartermaster's Hospital, July 12, 1863, with pneumonia—from which disease he speedily recovered.

During the treatment for this affection, a reducible inguinal hernia of the left side was discovered; the tumour was about the size of an egg, and did not extend into the scrotum. Upon this hernia, the patient consented to have the operation for radical cure performed. The operation was performed July 22d by the surgeon in charge of hospital—in the following manner: An incision was made downwards in the course of the spermatic cord about two inches in length, commencing two inches above the external abdominal ring, and the tissues laid back until the sac was exposed. The hernia was then reduced, and a curved needle with a handle, threaded double near the point, was passed in by the incision, through the columns of the ring, and brought out through the skin of the abdomen, where one thread was left. The needle was then carried back, and passed again through the columns of the ring at a different place, care being taken not to pinch the spermatic cord—and again brought out at the same point, where the other thread was detached and the needle withdrawn. These two threads were next tied together over a smooth wooden block provided for the purpose, thus drawing together the external ring like the strings of a bag. The wound was sutured with fine iron wire, compress and bandage applied, morphia administered, and the patient left. Chloroform was the anæsthetic employed.

For two or three days after the operation, there was great pain in the part, until suppuration was freely established, when the threads becoming loose were taken away; the sutures were also removed, and the wound enlarged to promote the free escape of pus. Intense tenderness over the abdomen, with tympanitis, was developed, and treated by emollient poultices and full doses of morphia to relieve pain. A distressing cough harassed the patient from the beginning, rendering the prognosis unfavourable from the constant strain upon the external ring. Slight hemorrhage occurred several times from the new incisions.

On the 6th day after operation, pyæmia set in with its usual phenomena—severe chills, anxious countenance, icterode appearance, etc., and in addition great pain over region of the liver. These symptoms continued to increase until the night of August 1, when a severer hemorrhage than any previous, occurred, which terminated the patient's life, eleven days after the operation.

There was no autopsy, but the evidence first of peritonitis and secondly of pyæmia, was undoubted; and had not the patient died of hemorrhage (which was probably from the spermatic artery), he must have shortly succumbed to the constitutional disease.

*December 9. Gunshot Wounds of the Bladder.*—Dr. ROBBINS reported the following two cases:—

CASE I. Private Sherman E. Perry, Co. B, 16th New York Volunteers. Age twenty-seven; wounded at battle of Salem Church near Fredericksburgh, Va., late in the afternoon of May 3d, 1863. While leaning forward in the act of stooping down, he was struck by a conical ball, which, after passing through his canteen and clothing, entered his body on the right side, half way between the anterior and superior spinous

processes of the ilium, and the symphysis pubis, and two inches below a line drawn from one anterior superior spinous process of the ilium to the other. The ball passing downwards and backwards, and a little to the right, lodged midway between the sacro-coccygeal articulation and the great trochanter of the right femur. When struck he fell, but soon got up, and walked to a house about forty rods to the rear. Four days following the ball was extracted, at the point mentioned as its having lodged, by a surgeon of the 121st New York Volunteers, who attended him nine days, when he was conveyed to the Potomac Creek Hospital, and came under the care of Surgeon Oakly, of the 6th Army Corps. No urine was passed through the urethra for eight days, but blood and urine passed freely through the wounds. On the ninth day a catheter was passed, and kept constantly in the bladder. On the 13th day of June he was transferred to the U. S. General Hospital, Armory Square, Washington, D. C. The wound where the ball was extracted was completely healed—the one made by the entrance of it, nearly so. The catheter was withdrawn four days after his admission into Armory Square, and following its withdrawal he passed, per urethra, a piece of blue cloth, beautifully incrustated with calcareous deposit. Quite a large calculi passed during the night of 20th, accompanied with intense pain. Symptoms of stone being present, the lateral operation of lithotomy was performed on the 9th day of September, by Dr. D. W. Bliss, the surgeon in charge of the hospital, and a soft calculus, weighing twenty-three grains, was extracted; the nucleus being a piece of cloth. The patient bore the operation well, and returned home the following month, apparently perfectly well. Information was obtained from him during the following year, when he was suffering no inconvenience from his wound.

CASE II. John Mahay, Co. A, 101st New York Volunteers. Wounded at battle of Bull Run, August 29, 1862. Conical ball entering upon the crest of the pubis, an inch to the right of the symphysis, passed through it and through the bladder in a downward and outward course, and made its exit between the spine of the ischium and the coccyx. Several pieces of bone passed through the urethra, during the first few months after his entrance into the hospital. The wounds made by the entrance and exit of the ball would close up for a longer or shorter period of time, and would again open and discharge urine, pus, and blood, and when urinating, that fluid would pass as freely through these fistulous openings as through the urethra. He generally urinated freely, but never without pain, referring it to the penis and perineum. The urine was always albuminous and muco-purulent, sometimes mixed with blood. A catheter was retained in the bladder during the earlier part of the treatment, but was discontinued on account of the great pain it produced. This patient was under the care at various times of quite a number of surgeons. When Dr. T. E. Stuart took charge of the case, about nine months after the patient's admission into the hospital, he dilated the wound made by the entrance of the ball, and extracted quite a large irregular shaped piece of bone—at the same time he introduced his finger through the opening, and felt a stone in the bladder. The patient's condition was such that it was not deemed prudent to operate for its removal. I do not know the precise day of the patient's death, but am convinced that he was an inmate of the hospital for a year and a half or more. He finally died from exhaustion. The bladder was found to be very much contracted, and three-eighths of an inch in thickness; its cavity



was nearly filled by two calculi, one weighing two drachms and ten grains, and the other four drachms.

1866. Jan. 20. *Abscess of Liver*.—Dr. YOUNG reported the following case, which occurred while he was acting House Physician in Bellevue Hospital:—

P. R., Irishman, æt. 35; hackman; intemperate; admitted June 2, 1864. Came under my care July 1. He was then extremely emaciated; his abdomen and lower part of thorax very much enlarged. Right leg very œdematous. The liver extending below the umbilicus, and considerably to the left of median line. Some effusion within the peritoneal sac. The bowels being flatulent and thereby increasing the permanent embarrassment to respiration, aromatics were administered with good effect, and, subsequently, small doses of podophyllin every four hours until the bowels were freely acted upon and the œdema of leg had disappeared. He was now enabled to move slowly about the ward.

July 10. At a point between the eighth and ninth ribs, and to the right of the median line eight inches, he had for several days experienced pain, but there was no redness present, but as fluctuation was discovered hepatic abscess was diagnosed.

22d. Dr. Loomis, the visiting physician, by using an exploring needle at that point discovered pus, whereupon he made a small incision with a scalpel, and the pus gushed forth in a steady stream until five and a half quarts were collected. The patient bore the operation well, and expressed himself as greatly relieved. The breathing became easy; pulse feeble, 112. A binder was placed around the body and a siphon of tow put in the opening. He was given eggnog and beef-tea during the evening.

23d. Appetite enormous. He was ordered, in addition to the regular diet, two pounds beef steak, two pounds mutton chops, nine eggs, two quarts milk, and twelve ounces of whiskey, all of which he consumed and called for more. In two or three days he was able to sit up on the side of the bed.

27th. Commenced sweating profusely; took very little nourishment; two grains of quinia with a few drops of aromatic sulphuric acid were given every three hours.

On the 29th the sweating had stopped, and his appetite was regained; he put on his clothes, walked to the portico, and there sat for two hours smoking his pipe. From the time of the operation the abscess was syringed out every day by means of a stomach-pump.

About the 15th of August maggots appeared in the matter washed out, but these were destroyed by creasote in a short time. He continued to improve until October 28, when I left the hospital. He had gained more than forty pounds, and was feeling so well that he was making preparations to leave for home in a few days. At that time the abscess was *discharging* about two ounces of healthy pus daily. Dr. A. Flint, in his recent work on practice, has referred to this case. (p. 465.)

March 24. *Idiopathic Endocarditis*.—Dr. ROBERTS reported the following case:—

A. H., twenty-one years of age, a soldier, had been under my observation about three weeks, with a gunshot flesh wound of the calf of the leg, which had nearly healed, when he was attacked with a chill, followed by high febrile excitement. I saw the patient during the fever, but passed

him by, prescribing a simple diaphoretic, supposing it to be a case of ordinary intermittent fever, then quite prevalent in this locality. I found the next morning the fever, instead of having subsided, had increased; the pulse was 120, full, hard, and regular; the face flushed; tongue dry and coated; and the man complained of a dull, burning pain in the region of the heart. I auscultated the organs situated in the chest, but could find no trouble there beyond the excessive action of the heart. I directed my measures to reducing the inflammatory excitement, and gave to that end hyd. chlor. mit. and pulv. jalap grains v each, adding antim. et potass tart. gr.  $\frac{1}{8}$  to each dose of the diaphoretic mixture. Upon making my evening visit the general condition of the patient was unchanged; he had a copious evacuation of the bowels. The next morning I found a great change had taken place during the night; the face was no longer flushed, but pale, and covered with a cold perspiration; pulse 140, and very irregular; breathing quick and laboured. Upon auscultation I discovered murmurs at the apex, over the body, and at the base of the heart, and coexistent with the first sound; the murmur was also transmitted up the carotids; the heart was not enlarged, the apex could be distinctly seen beating in its normal position. I now considered that I had a well-marked case of acute endocarditis to deal with, not having been preceded as is almost invariably the rule, by acute rheumatism. The patient said he had never had rheumatism, and there certainly was no evidence of the joints being affected at this time. I ordered tr. verat. viride, gtt. iij every hour; this was afterwards increased to five every hour, the effects being closely watched; the old fashioned prescription of hyd. chlor. mit., opii and ipecac was also given. When the patient had been under this treatment ten or twelve hours, his condition was much improved; the heart's action was less violent; the breathing much easier; the pulse had diminished twenty beats per minute; the patient altogether more quiet and comfortable. This treatment was persisted in four days, the doses being increased or diminished as the symptoms seemed to require, the patient gradually improving, with every prospect of recovery; the heart murmurs, however, increased in intensity, and remained very loud after convalescence. On the twentieth day of the disease the patient was enabled to leave his bed. From this time he took slight exercise each day, and was discharged the service some two months subsequently with hypertrophy and valvular disease of the heart. No enlargement was observed until several days after the discovery of the valvular trouble. The murmurs were unusually loud, being heard over the whole of the chest with the first sound of the heart, evidently the combined aortic direct and mitral regurgitant.

*March 31. Amputation of the Thigh followed by the Formation of a Large Sequestrum.*—Dr. J. FORD THOMPSON reported the following case:—

Albert Paris, aged 24 years, admitted into Providence Hospital, Dec. 22, 1865, with wound of right knee-joint from a pistol-ball injury received on the night of December 14. Ball entered at the external aspect of joint, between the patella and external condyle of the femur, opened the joint and lodged. Upon probing the wound a small piece of the condyle was found chipped off, but the ball could not be found (this examination being made on the eighth day after the receipt of the injury; previous to his entrance into the hospital he had been treated with purgatives and cold lotions locally applied). Limb very much swollen both above and below



the joint; the joint itself being distended with synovia and pus, a little of the latter was oozing from the wound. Patient with high inflammatory fever; restless and sleepless, with a quick pulse. Was of a good constitution, having up to this time enjoyed excellent health. After a consultation with Drs. Lincoln and Ford, and with the consent of the patient, it was decided to amputate the limb, but first a long incision was made into the joint partly for the purpose of ascertaining the point at which the ball had lodged and to see the condition of the joint; a large quantity of synovia mixed with pus escaped, which had been pent up on account of the small valvular opening made by the ball not being sufficiently free to admit of its exit. Synovial membrane intensely inflamed and softened, but there was no injury to the bone except the pieces chipped off from the external condyle as already noticed; the ball, however, was not found.

Amputation was then performed by the conical circular operation at the junction of the lower and middle third of the thigh; chloroform was administered and four ligatures applied. Hemorrhage slight and patient rallied in a short time from the effects of the chloroform and operation, feeling quite comfortable. Wound closed transversely by wire sutures and supported by a bandage.

On third day stump was dressed, union having taken place over a considerable portion; at that time, and during the interval since the operation, the patient's condition was good with the exception of a very quick pulse.

After the sixth day no dressing was used, and on the twelfth day the ligatures were taken away, the flaps having united except in the middle where a suture had been removed on the third day to allow of the exit of pus; in a few days this had filled up, leaving a small sinus from which there was a slight discharge. During this time the quick pulse continued with an irritative fever. One month after the date of admission, being anxious to leave the hospital, and the wound having healed with the exception of the small sinus mentioned (which was supposed to be due to the presence of a ring of exfoliated bone), he was allowed to return home.

Several days after the patient left the hospital he sent for Dr. Thompson, who found him suffering from a very high fever, with the limb swollen, hot and shiny in appearance. He diagnosticated the presence of an abscess as the result of diseased bone. Ordered fever mixture and applied hot fomentations to the stump. On the next day patient's condition very much improved, there having been a large discharge of offensive matters from the sinus during the night. On introducing a probe into the sinus diseased bone was felt, which, however, was quite firm and not entirely detached.

*March 1, 1866.* Considering sufficient time had elapsed to allow of the detachment of the diseased bone, although it appeared to be quite firm to the touch of the probe, an incision was made upon either side of the sinus sufficient to uncover the end of the bone, and, on the application of necrosis forceps, steady traction was made in the line of axis of the bone, and with the exercise of no great force the sequestrum was removed. The sequestrum was six inches in length, extending, doubtless, up to the base of the trochanters, having the size and shape of the femur; quite firm, honeycombed in appearance, and having new bone in considerable quantity thrown out all around it. A large quantity of fetid pus was discharged at the time of the removal of the bone, and some hemorrhage ensued, but, on the application of a sponge compress for a couple of hours, the latter was checked. On the next day, the fever and swelling of the stump having

very much subsided, the patient expressed himself as much relieved and more comfortable than he had been since the amputation. The cavity left by the extraction of the bone has filled up, and the stump is apparently as firm as ever.

After the amputation had been performed the knee-joint was carefully dissected out, and a small, round pistol-ball found imbedded in the tissue of the ligamentum patellæ.

Dr. Thompson, in commenting on the case, referred to the means employed by surgeons in order to prevent the exfoliation of bone after amputations, and stated that in this case he had been careful to dissect back the periosteum sufficiently to entirely cover the cut end of the bone, but he thought that at the time of the operation the periosteum with its surrounding tissues was already inflamed.